

1. (Twice Amended) A biodegradable sulfate composition comprising sulfates of an alkyl branched primary alcohol composition having from 8 to 36 carbon atoms, wherein said alcohol composition has an average number of branches per molecule of at least 0.7, less than 0.5 atom % of quaternary carbon atoms, and said branching comprises methyl and ethyl branches and 5% to 30% of the number of branches are ethyl branches.

12. (Amended) The biodegradable sulfate composition of claim 1 wherein from 10% to 20% of the number of branches are ethyl branches.

70. (Amended) A branched primary alcohol composition having 8 to 36 carbon atoms, an average number of branched per molecule chain ranging from 0.7 to 2.1, less than 0.5 atom % of quaternary carbon atoms, and wherein less than 5% of the alcohol molecules in the composition are linear alcohols.

75. (Amended) The composition of claim 70 having an average number of branches per molecule ranging from 1.3 to 2.1.

15 Please cancel claims 11 and 74 without prejudice.

Please add the following new claims:

85. (New) A biodegradable sulfate composition comprising sulfates of an alkyl branched primary alcohol composition having from 8 to 36 carbon atoms, wherein said alcohol composition has an average number of branches per molecule of at least 0.7, less than 0.5 atom % of quaternary carbon atoms, and said branching comprises methyl and ethyl branches and 5% to 25% of the number of branches are on the C₂ atoms of the alcohol composition.

86. (New) The biodegradable sulfate composition of claim 85 wherein said alcohol composition contains less than 5% of linear alcohols.

87. (New) The biodegradable sulfate composition of claim 86 wherein said alcohol composition contains less than 3% linear alcohols.

88. (New) The biodegradable sulfate composition of claim 85 wherein from 10 to 50% of the number of branches are on the C₃ atoms of the alcohol composition.

89. (New) The biodegradable sulfate composition of claim 88 wherein from 15 to 30% of the number of branches are on the C₃ atoms of the alcohol composition.

90. (New) The biodegradable sulfate composition of claim 85 wherein at least 40% of the branches in the alcohol are methyl branches.

5 91. (New) The biodegradable sulfate composition of claim 85 wherein 5% to 30% of the branches are ethyl branches.

92. (New) The biodegradable sulfate composition of claim 85 wherein said alcohol composition contains at least 5% of isopropyl terminal type of branching.

93. (New) The biodegradable sulfate composition of claim 85 wherein said alcohol
10 composition is obtained by skeletally isomerizing olefins under skeletal isomerization conditions.

94. (New) A branched primary alcohol composition having from 8 to 36 carbon atoms, an average number of branches per molecule of at least 0.7, less than 0.5 atom % of quaternary carbon atoms, and said branching comprises methyl and ethyl branches and
15 5% to 25% of the number of branches are on the C₂ atoms of the alcohol composition.

95. (New) The alcohol composition of claim 94 wherein said alcohol composition contains less than 5% of linear alcohols.

96. (New) The alcohol composition of claim 95 wherein said alcohol composition contains less than 3% linear alcohols.

20 97. (New) The alcohol composition of claim 94 wherein from 10 to 50% of the number of branches are on the C₃ atoms of the alcohol composition.

98. (New) The alcohol composition of claim 97 wherein from 15 to 30% of the number of branches are on the C₃ atoms of the alcohol composition.

99. (New) The alcohol composition of claim 94 wherein at least 40% of the branches
25 in the alcohol are methyl branches.

100. (New) The alcohol composition of claim 94 wherein 5% to 30% of the branches are ethyl branches.

101. (New) The alcohol composition of claim 94 wherein said alcohol composition contains at least 5% of isopropyl terminal type of branching.

102. (New) The alcohol composition of claim 94 wherein said alcohol composition is obtained by skeletally isomerizing olefins under skeletal isomerization conditions.

F E E

The Examiner is hereby authorized to charge the additional filing fee for the 16 extra claims over 27 claims and 2 new independent claims to Account No. 19-1800.

R E M A R K S

The Examiner is respectfully requested to reconsider the application in view of the following remarks.

Claim 1 has been amended by incorporating limitation therein from claim 11. Claim 11 has been cancelled as redundant. Claim 70 has been amended by incorporating limitation therein from claim 74. Claim 74 has been cancelled as redundant. Claims 85-102 have been added to define specific embodiments of the invention. Support for independent claims 85 and 94 are found at claim 1 and claim 5. Support for claims 86-91 and 95-100 are found at claims 3-12. Support for isopropyl terminal type of branching is found at page 10, lines 10-13. Support for the compositions obtained from skeletally isomerized olefins is found at page 9, lines 17-18.

Claims 1-12, 70-83 are rejected under 35 USC 103(a) as being obvious over WO 85/02175 (WO '175). The rejection is respectfully traversed for the following reasons.

The invention is a biodegradable sulfate composition and a branched primary alcohol composition. The biodegradable sulfate composition comprises sulfates of an alkyl branched primary alcohol composition having from 8 to 36 carbon atoms, wherein said alcohol composition has an average number of branches per molecule of at least 0.7, and said branching comprises methyl and ethyl branches. The claimed compositions have 5% to 30% of the number of branches as ethyl branches and/or 5% to 25% of the number of branches on the C₂ atoms and/or branched per molecule chain ranging from 0.7 to 2.1 and/or the alcohol composition obtained by skeletally isomerizing olefins.

WO '175 reference is directed to detergent range aldehyde and alcohol mixtures and derivatives in the C₁₁₋₁₆ carbon range by certain oxo and aldol reaction that

result in certain branched products. (see abstract) A representative structure can be seen at page 10 and page 6. Because of the manufacturing method involving an aldol reaction, the structure always contains a branching in the C₂ position having 3 carbon atoms or more. Further Table 3 represents tetradecanols obtained according to the disclosure in WO '175.

5 Based on calculation of available information from Table 3 (pages 38-39b) and pages 8-9, the tetradecanol products from the process of WO '175 appears to have less than 5% ethyl branches and always contains branching in the C₂ position having 3 carbon atoms or more.

Applicants submit that the Examiner has not met the burden that the Supreme Court and the Federal Circuit places on the U.S. Patent and Trademark Office to
10 establish *prima facie* obviousness. The ultimate determination of whether an invention is or is not obvious is a legal conclusion based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 148 USPQ 459, 467 (1966); See *In Re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999).
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It is submitted that the composition claimed by applicants are significantly different than that taught by WO '175. Applicants claimed compositions are not a simple position isomer or homolog to those taught by the WO '175 reference and that they are significantly different complex composition produced by a different method.
20 The WO '175 reference does not provide how to produce the composition produced by applicants method. Applicants claimed composition is a unique composition that is in part characterized by the amount and kind of branching in the primary alcohol composition that is different than that taught by WO '175 produced by the combination of skeletal isomerization then hydroformylation. Therefore, Applicants submit that the
25 Examiner's obviousness rejection is an improper reconstruction of the invention based on impermissible hindsight gained from the knowledge gleaned from the Applicants' disclosure. See, *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Accordingly, Applicants respectfully request withdrawal of the rejection.

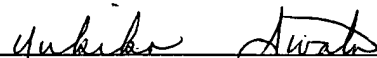
Claims 1-12 and 70-83 are rejected under the judicially created doctrine of double patenting over claims 1-26 of U.S. Patent No. 6,150,322. A terminal disclaimer is submitted herewith.

5 The Examiner is respectfully requested to reexamine the claims and pass the case to issue. If it would be considered helpful in resolving any issues in the case, the Examiner is encouraged to contact the undersigned at the number below.

Respectfully submitted,

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(MARKED-UP TO SHOW ALL CHANGES)

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5 alkyl branched primary alcohol composition having from 8 to 36 carbon atoms, wherein
said alcohol composition has an average number of branches per molecule of at least 0.7,
less than 0.5 atom % of quaternary carbon atoms, and said branching comprises methyl
and ethyl branches and 5% to 30% of the number of branches are ethyl branches.

10 12. (Amended) The biodegradable sulfate composition of claim ~~11~~, 1 wherein from
10% to 20% of the number of branches are ethyl branches.

70. (Amended) A branched primary alcohol composition having 8 to 36 carbon
atoms, an average number of branched per molecule chain ~~of at least 0.7~~ ranging from 0.7
15 to 2.1, less than 0.5 atom % of quaternary carbon atoms, and wherein less than 5% of the
alcohol molecules in the composition are linear alcohols.

75. (Amended) The composition of claim ~~74~~, 70 having an average number of
branches per molecule ranging from 1.3 to 2.1.

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